4   Project Activities

4.1 Gathering of County Stakeholder Information

4.1.1 Description of Activity

For each of the three counties and the Department of Corrections in the Tri-County consortium, detailed communications-related information was gathered. Some of this information was gathered by the county representatives sitting on the TIC Board, some of it was gathered by employees of the radio shops used by the counties, and some by the Project Manager. This information includes:

- A list of relevant county stakeholders. County stakeholders are those persons or agencies operating within the county who have a stake in communications interoperability.
- Questionnaires given to and filled out by county stakeholders.
- Letter of support from the county stakeholders.
- Physical surveys of all the existing radio sites in the county

Other information gathering involved the review of other radio project reports such as the "Phoenix Fire Department Radio System Safety Project". The following is a link to the report:

http://www.ci.phoenix.az.us/FIRE/radioreport.pdf

This report has been referenced by many people in the fire discipline as it pertains directly to trunked digital radio operations for firefighters. Aspects of this report were utilized to ensure that the design of a new radio system accounted for the needs of the fire community.

4.1.2 Potential Candidate Stakeholder List

To aid in the creation of each county's stakeholder list, the following potential stakeholder list was created. Please note that not all of the agencies and entities on this list will be applicable in all counties. The list was created simply to aid people in identifying those stakeholders of interest in their county.

County Level – To Be Contacted By the County Representatives

1. Local Law Enforcement Agencies
   A. County Sheriffs
   B. City Police Departments
2. Local Public Safety/Emergency Responders

NORTHROP GRUMMAN

    A. EMS (public and private)
    B. City Fire Departments
    C. Rural and/or Volunteer Fire Departments
    D. Search and Rescue Teams
    E. Airport Security
    F. County-level DES
3. Tribal Law Enforcement Agencies
4. City/County Works
5. Juvenile Probation (District Courts)
6. County Public Health Reps.
7. Local Sanitarians
8. County Commissioners
9. City/County Utilities (electricity, gas)
10. Broadcast Radio Stations
11. Coroner
12. Amateur Radio Operators
13. Railroad (remember Alberton Gorge and the Helena railroad explosion of 1989)
14. Civil Air Patrol (better to deal with these folks locally, or at most, regionally, as those who participate in local search and rescue are local, private pilots.)
15. Schools (remember Columbine)
16. Radio Shops
17. Agencies in bordering counties not in the TIC.
18. Representatives from bordering states, as appropriate.

Multi-County Level

1. Other interoperability radio consortiums, such as NTIC, Big Sky 11, and Lewis & Clark County.
2. District DES
3. Drug Task Forces
4. DUI Task Forces
5. Adult Parole & Probation Regional Administrators (Dept. of Corrections)

State Level

1. Montana Army National Guard (Military Affairs)
2. Montana State-level DES
3. Montana Department of Justice
    A. Highway Patrol
    B. Criminal Investigations Bureau
    C. Narcotics Investigation Bureau
    D. Fire Prevention & Investigations Bureau
    E. Gambling Investigations Bureau

NORTHROP GRUMMAN

4. Montana Department of Transportation (including District Administrator)
5. DPHHS Public Health
6. Montana Department of Fish, Wildlife and Parks
7. Montana Department of Corrections, including prison, juvenile parole, and adult parole and probation
8. Montana Department of Livestock
9. Montana Department of Environmental Quality

Multi-State Level

Example: Missouri River Drug Task Force

Federal/International Level

1. Customs
2. US DOT
3. Red Cross
4. DEA
5. INS
6. FBI
7. US Marshals Service
8. US Probation
9. BLM
10. Border Patrol
11. US Forest Service
12. US National Parks Service
13. FEMA
14. Canada

4.2 County Stakeholder Meetings

4.2.1 Description of Activity

As part of the *Needs Assessment* phase, the county representatives, Project Coordinator and Project Manager met face-to-face with as many of the county stakeholders as was possible. Sometimes the county representatives met with the stakeholders without the Project Manager, and sometimes the Project Manager met with stakeholders without the county representatives. However, there was at least one meeting held in each of the three counties that included the county representative, Project Coordinator and the Project Manager.

Prior to the meeting with the Project Manager, all identified county stakeholders were given a questionnaire to fill out. These were to be, ideally, completed and returned to the county

representative before the meeting with the Project Manager. Sometimes this could be done and sometimes it was not, due to schedules and other duties.

During these meetings, stakeholders were asked to describe their most pressing issues. In addition, any questions they might have had concerning the questionnaire were raised and answered. Technical questions sometimes arose about radios, trunking, and P25 compatibility. These questions were answered to the best of the ability of those present.

Follow up meetings were held in each county near the end of the project to present some of the findings, the design strategy and preliminary design, which included coverage maps.

4.2.2 Typical Initial Meeting Agenda

Each meeting in each county was a little different from the others. In general, the Project Manager led the meeting, but allowed the participants to talk about the things they felt were important. In general, the meetings lasted from two to three hours, and very roughly followed this agenda:

Opening Remarks – Quick Review of TIC Purpose & Goals..10 minutes
County Representative

Welcome, Introductions ....10 minutes
Project Manager

Project Overview, P25 and Trunking...40 minutes
Stakeholders

Comments, Issues, and Questions From Stakeholders (cont.) ....30 minutes
Stakeholders

Wrap Up: Next Steps, Homework, Action Items...15 minutes
Project Manager

4.3 Other Materials Provided to County Representatives

4.3.1 Questionnaire Template

Instructions: Please fill out this information to the best of your ability, contacting other people or agencies as needed. There may be some overlap in the answers to some questions.	
Section 1: General Information	
Name of Agency:	**Location of Agency:**
Date of Interview or Survey Completion:	**Agency Contact Person & Phone Number:**
Section 2: Questions	

1. **Coverage**

   A. **Approximately what percentage of your jurisdictional area is adequately covered? For the purposes of this question, adequate means coverage means it's sufficient to get the job done.**

   B. **How acceptable is that coverage? Are you happy with the "adequate" coverage you described in question 1? For example, you may only have 95% coverage, but that may be quite acceptable, since the area(s) not covered aren't important.**

   C. **If unacceptable, what causes it? (Severe terrain, Gaps, Antenna patterns, In-building problems, etc.)**

   D. **If acceptable, what, if any improvements are still be desired?**

   E. **Do you have mobile-to-mobile coverage countywide? If not, do you need it?**

2. Dispatch

    A. How is dispatch currently conducted?

    B. From where?

    C. Hardware used?

    D. Number of positions?

    E. Adequate? If not, why? How could it be improved?

NORTHROP GRUMMAN

3. Which parts and with whom is your system currently being shared?	4. What is good about your current system?

5. **What are the issues, problems, or challenges with your current system not already covered above? (Examples (but don't limit yourselves to these): Coordination issues with other agencies, coverage, encryption, channel congestion, current interoperability problems, legal restrictions or obstructions, obsolete and/or aging equipment.) Please be honest, but try to avoid inflammatory or "blaming" words.**

6. **What other agencies do you need to communicate with? Please list all you can think of, including cross-county, state, cross-state, and federal agencies.**

   A. On an emergency basis only:

   B. On an administrative basis (check-in, check-out) and an emergency basis:

7. **Please describe your radio communications during typical day-to-day (administrative) activities and during emergencies.**

8. List, in priority order, up to five (5) communications improvements needed from initial dispatch to call completion. (Examples: Call alert, paging to units, encryption, countywide mobile-to-mobile coverage, etc.)

    1.

    2.

    3.

    4.

    5.

9. List, in priority order, up to five (5) factors that will be critical to future radio systems in your county, city, or area of jurisdiction. (Examples, but don't limit yourself to these: Flexibility, Affordability, Reliability, Redundancy, Simplicity, Maintainability, Education, etc.)

    1.

    2.

    3.

    4.

    5.

10. List the frequencies your agency currently uses and how each is used (Blue, Red, Send/Receive, Fire, EMS, LE).

11. Current Equipment Inventory – Base Stations (You may need help from your radio shop to fill out this section.)

Total Number of Base Stations: _____

A. High Frequency or Lower (HF, Less than 30 MHz)
    i. Total Number: _____
    ii. Digital or Analog? _____
B. VHF Low Band (30–46 MHz)

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

    iii. **Narrowband or Wideband?** _____

    iv. **Number that are P25-capable now:** _____

    v. **Number that could be upgraded to P25:** _____

C. VHF High Band (148-174 MHz):

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

    iii. **Narrowband or Wideband?** _____

    iv. **Number that are P25-capable now:** _____

    v. **Number that could be upgraded to P25:** _____

D. UHF Low Band (300-512 MHz): _____

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

    iii. **Narrowband or Wideband?** _____

    iv. **Number that are P25-capable now:** _____

    v. **Number that could be upgraded to P25:** _____

E. UHF 700/800/900 MHz Band (750-960 MHz): _____

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

    iii. **Narrowband or Wideband?** _____

    iv. **Number that are P25-capable now:** _____

    v. **Number that could be upgraded to P25:** _____

---

12. Current Equipment Inventory – <u>Mobile</u> Units (You may need help from your radio shop to fill out this section.)

Total Number of <u>Mobile</u> Units: _____

F. High Frequency or Lower (HF, Less than 30 MHz)

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

G. VHF Low Band (30–46 MHz)

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

    iii. **Narrowband or Wideband?** _____

    iv. **Number that are P25-capable now:**

13. Current Equipment Inventory – <u>Portable</u> Units (You may need help from your radio shop to fill out this section.)

Total Number of <u>Portable</u> Units: _____

A. High Frequency or Lower (HF, Less than 30 MHz)

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

B. VHF Low Band (30–46 MHz)

    i.   **Total Number:** _____

    ii. **Digital, Analog, or Both?** _____

    iii. **Narrowband or Wideband?** _____

    iv. **Number that are P25-capable now:**

_____

    v. **Number that could be upgraded to P25:** _____

H. **VHF High Band (148-174 MHz):**
    i. **Total Number:** _____
    ii. **Digital, Analog, or Both?** _____
    iii. **Narrowband or Wideband?** _____
    iv. **Number that are P25-capable now:** _____
    v. **Number that could be upgraded to P25:** _____

I. **UHF Low Band (300-512 MHz):** _____
    i. **Total Number:** _____
    ii. **Digital, Analog, or Both?** _____
    iii. **Narrowband or Wideband?** _____
    iv. **Number that are P25-capable now:** _____
    v. **Number that could be upgraded to P25:** _____

J. **UHF 700/800/900 MHz Band (750-960 MHz):** _____
    i. **Total Number:** _____
    ii. **Digital, Analog, or Both?** _____
    iii. **Narrowband or Wideband?** _____
    iv. **Number that are P25-capable now:** _____
    v. **Number that could be upgraded to P25:** _____

_____

    v. **Number that could be upgraded to P25:** _____

C. **VHF High Band (148-174 MHz):**
    i. **Total Number:** _____
    ii. **Digital, Analog, or Both?** _____
    iii. **Narrowband or Wideband?** _____
    iv. **Number that are P25-capable now:** _____
    v. **Number that could be upgraded to P25:** _____

D. **UHF Low Band (300-512 MHz):** _____
    i. **Total Number:** _____
    ii. **Digital, Analog, or Both?** _____
    iii. **Narrowband or Wideband?** _____
    iv. **Number that are P25-capable now:** _____
    v. **Number that could be upgraded to P25:** _____

E. **UHF 700/800/900 MHz band (750-960 MHz):** _____
    i. **Total Number:** _____
    ii. **Digital, Analog, or Both?** _____
    iii. **Narrowband or Wideband?** _____
    iv. **Number that are P25-capable now:** _____
    v. **Number that could be upgraded to P25:** _____

14. Please use this space to add any items or comments which you would like to make that have not been covered above. Again, please be honest, but try to avoid inflammatory or "blaming" words.

Note: some counties were provided a slightly different version of this questionnaire early in the process. This version is what was used at each county meeting.

NORTHROP GRUMMAN

4.3.2 Letter of Support Template

The following is the "Letter of Support" template, which was distributed to county stakeholders:

August 31, 2005

Tri-County Interoperable Consortium
Mr. Dave Clouse, Project Coordinator

Townsend, MT 59644

To Whom It May Concern:

I am writing this letter on behalf of *Group/Company/Agency Name* in support of the Tri-County Interoperable Consortium Project. This project is critical to the community, and to the area service providers that use communications for the people they serve.

We anticipate that the cost of this project is substantial. As such, funding from federal and other sources must be secured in order to accomplish the project. *(May include description of how emergency communications affects your company/agency).*

Our *Group/Company/Agency Name* looks forward to participating in this project. Our goal is to work together with the Tri-County Interoperable Consortium toward a reliable interoperable communications system.

Sincerely,

Your Name
Your Group/Company/Agency Name
Your Address
Your City, State Zip

4.4 Site Surveys

Site surveys were performed by many different individuals depending on the site. These surveys are cursory in nature and provide enough information to conduct the preliminary design. A detailed site survey will need to be conducted in the design phase of the project. This detailed survey will allow accurate estimates to be provided for improvement to power factors, grounding, building capacity and tower capacity.

NORTHROP GRUMMAN

4.5 Preliminary Design

The preliminary design follows a strategic implementation plan devised based on factors that include coverage of near by sites, overall site condition and available funding. If existing sites with similar coverage footprints in better condition could be used, they were selected for improvements over sites that needed more work and ultimately money. The coverage needs of the local agencies were taken into account to fill in holes. Strategy on which sites to develop into trunked sites were based on population density, site coverage and microwave paths. Further details are provided further in the document.

4.6 Non-County Stakeholders

In addition to stakeholders within the counties, several state or federal stakeholders were contacted as well. It is believed that these stakeholders are also important to include in the process. In many emergencies, such as a forest of grassland fire, communication with these non-county stakeholders is extremely critical.